



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: L.A. Coldren et al.
Serial No.: 09/916,541
Filed: July 27, 2001
For: **INTEGRATED SENSOR**
Atty. Dkt. No.: 1279-386/10103649

Examiner: Cheu, Changhwa J.
Art Unit: 1641

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Date: July 3, 2003

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RESPONSE TO FINAL OFFICE ACTION

Sir:

As an initial matter, this will acknowledge a conversation with Examiner Jacob Cheu on July 3, 2003 with regard to the rejection of the claims 3, 13, and 22-24. The Office Action to which this response is directed indicated in its cover sheet that claims 1-24 were rejected, but in the body of the Office Action, only claims 1, 2, 4-12, and 14-24 were rejected. In the conversation with Examiner Cheu, he stated that the Office Action intended to reject claims 3, 13, and 22-24 on the same bases recited in the previous Office Action of November 14, 2002. Accordingly, Applicant will respond on the

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assumption that the Examiner has made the rejections contained in the previous Office Action.

The rejection of claims 1, 2, 4-12, and 14-21 under 35 USC § 103 (a) as being unpatentable over Lading et al. in view of Beregovski et al. and Seul et al. is respectfully traversed. Applicants believe that the Examiner has misinterpreted the amendment made in response to the last Office Action in which the sample chamber is described as separate from the phase control section. In response to that amendment, the Examiner states that a similar feature appears in the primary reference, Lading et al., in Figure 2, but an examination of Figure 2 shows that it is only the flow channels for the inlet samples that are separate from the laser cavities, not any phase control section. Indeed, Lading et al., cannot show this claim limitation because, as the Examiner acknowledges in the paragraph bridging pages 2 and 3 of the Office Action that "Lading et al. do not specifically disclose placing a phase section in its sensor laser." Beregovski et al. do not teach the feature and indeed teaches away from it. They describe the phase section, or the phase section and grating, of the sensing layer as covered with a layer sensitive to the chemical in question (page 117, paragraph 2.1 with regard to Figure 1). Seul et al. is irrelevant to this issue.

The rejection of claims 3 and 13 over Lading et al. and Beregovski et al., further in view of Seul et al., is respectfully traversed. Not only does Seul et al. not have anything to do with the above-discussed limitation, but it has nothing to do with an integrated optical chip device using heterodyning lasers.

The rejection of claims 22-24 over Lading et al. is respectfully traversed. Claim 22 was previously amended to call for a phase control means to establish a heterodyne frequency for exposed evanescent field material to carry an adsorbent separate from the phase control means. Since Lading et al. has been acknowledged by the Examiner as not disclosing a phase section in its sensor laser, it cannot be understood how these method claims can be considered to be obvious over Lading et al.

Applicants believe that the claims are now in condition for allowance and respectfully solicit a Notice of Allowance. In the event that the claims are not allowed, the Examiner is requested to enter these remarks as placing the Application in better for condition for appeal. A Notice of Appeal is submitted herewith.

Allowance of all the claims is respectfully solicited.

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The Commissioner is hereby authorized to charge payment of any fees required associated with this communication or credit any overpayment to Deposit Account No. 50-0337. If an extension of time is required, please consider this a petition therefor and charge any additional fees which may be required to Deposit Account No. 50-0337. A duplicate copy of this paper is enclosed.

Respectfully submitted,



Robert Berliner
Registration No. 20,121

Date: July 3, 2003

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